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AUTHOR	Emmer, Edmund T.; Millett, Gregg B.
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ABSTRACT

This study evaluated the effects of a sequence of microteaching tasks on the teaching behavior of secondary education students. Audio tape recorded lessons of two groups of students were compared. One group of 27 taught ten lessons in a teaching laboratory using a sequence of instructional and learning tasks. A control group of 27 taught two lessons only. Instructions for both groups for the taped lesson were the same. Analysis of the final performance lessons indicated that the experimental group was rated significantly higher than the control group on three of four teaching dimensions (determining readiness, motivating, evaluating): there was no difference on the dimension of clarifying objectives. Behaviorally, the experimental group had significantly greater amounts of use of student ideas, questions, directions, student response, and student initiation. The controls used more lecture. The results support continued use and experimentation with microteaching in the undergraduate teacher preparation. Findings should be of interest to teacher educators and researchers in teacher education. (Author)

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Abstract

An Assessment of Terminal Performance in a Teaching Laboratory: a Pilot Study

Edmund T. Emmer; Gregg B. Millett

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The purpose of this study was to evaluate the effects of a sequence of microteaching tasks on the teaching behavior of secondary education students. Audio tape recorded lessons of two groups of students were compared. One group (n = 27) taught ten lessons in a teaching laboratory, using a sequence of instructional and learning tasks. A control group (n = 27) taught two lessons only. Instructions for both groups for the taped lesson were the same. Analysis of the final performance lessons indicated that the experimental group was rated significantly higher than the control group on three of four teaching dimensions (Determining Readiness; Motivating; Evaluating): there was no difference on the dimension of Clarifying Objectives. Behaviorally, the experimental group had significantly greater amounts of use of student ideas, questions, directions, student response, and student initiation. The controls used more lecture. The results support continued use and experimentation with microtreaching in undergraduate teacher preparation. Findings should be of interest to teacher educators and researchers in teacher education.

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AN ASSESSMENT OF TERMINAL PERFORMANCE IN A TEACHING LABORATORY: A PILOT STUDY

by

Edmund T. Emmer
Department of Educational Psychology

Gregg B. Millett
Department of Curriculum and Instruction

THE RESEARCH AND DEVELOPMENT CENTER
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Purpose

In recent years considerable attention has been focussed upon microteaching as a means of helping teachers improve their teaching performance (cf. Stanford University, 1967; Meier, 1968; Borg, 1968). One use for microteaching experiences is to incorporate them into teacher preparation courses, to serve as a vehicle for helping the teacher incorporate into his behavior those principles learned in the context of regular course instruction.

The purpose of this study was to assess the effect of a sequence of microteaching tasks on the behavior of Juniors preparing for secondary school teaching. This sequence of microteaching tasks formed the laboratory component of a six semester hour combined educational psychology and curriculum and instruction course.

The following sequence of tasks was used.

A. Instructional Tasks.
   1. Clarifying objectives
   2. Determining pupil readiness
   3. Motivating
   4. Evaluating instructional outcomes

B. Learning Tasks.
   1. Developing psycho-motor skills
   2. Teaching concepts and principles
   3. Problem-solving: convergent and divergent
   4. Attitude formation

The instruction and learning tasks focus upon dimensions of teaching which are generally seen as important (e.g., Ryans, 1963; Glaser, 1962), and which are generally independent of grade level

and subject matter content. In fact, textbooks (e.g., Cronbach, 1963; DeCecco, 1968; McDonald, 1965; Ausubel, 1968) in educational psychology and instruction treat as major content areas many of the Instructional and/or Learning Tasks used here.

Procedure

In this study, the students (n = 27) in the combined course taught a total of ten lessons (10-15 minutes each) during the semester, one for each of the eight Instructional and Learning tasks, one re-teach after the first four tasks, and one terminal performance lesson. Microteaching groups of size seven to nine were used, with peers acting as students for the lessons. The teachers also received regular feedback from their colleagues and instructors in the form of discussions and ratings related to the objectives of the particular teaching task, and of the effects of the lesson on the students.

In order to assess the terminal performance of the laboratory teaching group, ratings of the audio tapes of their terminal performance lessons were compared to ratings of the audio tapes of a comparison group. The comparison groups' tapes (n = 27) were selected randomly from tapes made in three classes not utilizing a teaching laboratory as a part of their course, but who had two microteaching experiences, one at the beginning and one at the end of the semester. The comparison classes were three semester hour Curriculum and Instruction courses; the students enrolled in them had completed or were taking concurrently an educational psychology course. Subjects in the two groups were equivalent on GPA, sex, and teaching majors.

Instructions for both groups' final tape recorded lessons were the same: to prepare and teach a 10-15 minute lesson, which would not be used in any way to grade or evaluate them.

The audio tapes of the two groups were compared using four rating scales, as follows.

A. Clarifying Objectives: Was it clear what the students were supposed to be able to do as a result of the lesson?

B. Determining Readiness: To what extent was student competence and interest relative to the lesson determined?

C. Motivating: How interesting was the teacher and the lesson; how interested were the students?

D. Evaluating: To what extent did the teacher determine what students learned from the lesson?

Each rating scale was a six point scale, with a 1 representing the highest and a 6 the lowest rating. Ratings were made blind. The reliabilities (Winer, 1962, p.124 ff.) of the average of two raters for each scale over all lessons were .74 (Clarifying); .88 (Determining Readiness); .80 (Motivating); .87 (Evaluating).

In addition, each lesson was coded using Flanders' Interaction Analysis (Flanders, 1965). The categories defined in Flanders' observational system are given in Appendix A.

Results

Average ratings for the group who had the sequence of microteaching tasks were compared to the ratings of the comparison group. The experimental group was rated significantly higher on Determining Readiness, Motivating, and Evaluating. There was no significant difference on

ratings for Clarifying Objectives. Table 1 summarizes the results of these comparisons.

Table 1

The average percentage of time coded into each of Flanders' ten Interaction Analysis categories was then determined, and used to compare the two groups. The experimental group had significantly greater amounts of Use and Acceptance of Student Ideas, Questions, Directions, Student Response, and Student Initiation. The comparison group had greater amounts of Lecture. Table 2 summarizes the results of these comparisons.

Table 2

In summary, the experimental group was clearly superior on three of the four dimensions of teaching that were rated. Behaviorally they exhibited more acceptance of student ideas, questioned more, lectured less, gave more directions, and elicited greater amounts of student participation, both responsive and initiated.

Discussion

Several limitations are evident in interpreting these results. The most obvious is the inability to specify if the two groups differed in any other relevant way than the experimental condition. For example, as mentioned earlier, the experimental class was a combined educational psychology and curriculum and instruction class, whereas the comparison

group was made up of students from three curriculum and instruction classes who had previously taken an educational psychology course. Likewise, the instructors of the courses were different, so possible effects of that variable were not controlled. Nor can a Hawthorne effect be ruled out.

Even presuming these factors to have little influence on the actual teaching behavior of the two groups, one must ask what actually produced the differences found in this study. Was it the sequence of teaching tasks themselves, a practice effect, the types of feedback provided the teachers, or some other factor or combination of factors? Although there is no certain answer available from this pilot study, the results strongly support further use and investigation of sequential microteaching experiences integrated into educational psychology and curriculum and instruction courses.

Appendix A: Categories for Flanders' Interaction Analysis

(Adapted from Flanders, 1965)

1. ACCEPTS FEELING: accepts and clarifies the feeling tone of the students in a nonthreatening manner. Feeling may be positive or negative. Predicting or recalling feelings are included.

2. PRAISES OR ENCOURAGES: praises or encourages student action or behavior. Jokes that release tension, not at the expense of another individual, nodding head.

3. ACCEPTS OR USES IDEAS OF STUDENT: clarifying, building, or developing ideas or suggestions by a student. As teacher brings more of his own ideas into play, shift to category five.

4. ASKS QUESTIONS: asking a question about content or procedure with the intent that a student answer.

5. LECTURING: giving facts or opinions about content or procedure; expressing his own ideas, asking rhetorical questions.

6. GIVING DIRECTIONS: directions, commands, or orders to which a student is expected to comply.

7. CRITICIZING OR JUSTIFYING AUTHORITY: statements intended to change student behavior from nonacceptable to acceptable pattern; bawling someone out; stating why the teacher is doing what he is doing; extreme self-reference.

8. STUDENT TALK-RESPONSES: talk by students in response to teacher. Teacher initiates the contact or solicits student statement.

9. STUDENT TALK-INITIATION: talk by students which they initiate. If "calling on" student is only to indicate who may talk next, observer must decide whether student wanted to talk. If he did, use this category.

10. SILENCE OR CONFUSION: pauses, short periods of silence and periods of confusion in which communication cannot be understood by the observer.

Table 1

Summary of Results for t Tests of Ratings[a]

Rating Scale	Experimental			Comparison				
	n	Mean	S.D.	n	Mean	S.D.	t	p
Clarifying Objectives	27	2.94	1.07	27	3.44	1.09	1.60	N.S.
Determining Readiness	27	2.18	..75	27	4.18	1.48	6.13	.001
Motivating	27	2.61	1.10	27	4.07	1.10	4.79	.001
Evaluation	27	2.55	.88	27	4.37	1.52	5.28	.001

[a]For each scale, the highest rating is 1; the lowest is 6.

Table 2

Summary of Results for t Tests of Interaction Analysis Category Percentages

Category	Experimental			Comparison				
	n	Mean	S.D.	n	Mean	S.D.	t	p
Accepts feeling[a]	-	-	-	-	-	-	-	-
Praises	27	1.28	1.34	27	.74	178	1.78	N.S.
Uses student idea	27	6.24	2.50	27	3.20	4.23	3.15	.01
Questions	27	6.60	4.74	27	4.33	3.38	2.36	.05
Lecture	27	41.51	13.89	27	73.49	14.67	-8.08	.001
Directions	27	4.61	4.47	27	1.80	2.27	2.90	.01
Criticism[a]	-	-	-	-	-	-	-	-
Student response	27	12.17	11.53	27	4.06	3.12	3.45	.01
Student initiation	27	20.22	7.01	27	2.41	4.77	11.93	.001
Silence or confusion	27	7.02	5.13	27	9.74	7.59	-1.51	N.S.

[a]Too few observations to obtain reliable estimates.

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